IN THE CLAIMS:

The claims are amended as recited herein. Please note that all claims currently pending and under consideration in the referenced application are shown below, in clean form, for clarity. Please enter these claims as amended. Also attached is a version with markings to show changes made to the claims.

1. (Amended twice) An apparatus for applying adhesive material to one or more underside surfaces of at least one semiconductor component, comprising:

an adhesive reservoir configured to provide an exposed surface of adhesive material to only a defined portion of each of one or more underside surfaces of at least one semiconductor component positioned thereover, said adhesive reservoir comprising at least one pool chamber defined by at least one upward facing opening, said adhesive reservoir shaped such that the exposed surface of adhesive material is supplied to a precise location above said at least one upward facing opening, said adhesive material having a surface tension; and

at least one mechanism associated with said adhesive reservoir, said at least one mechanism configured to level said exposed surface of adhesive material at said precise location above said at least one upward facing opening and maintain said exposed surface of adhesive material at a substantially constant height.

2. (Amended) The apparatus of claim 1, wherein said at least one upward facing opening, in combination with said surface tension of said adhesive material, is configured to provide an exposed surface comprising a meniscus.

3. (Reiterated) The apparatus of claim 1, wherein said at least one mechanism is configured to manipulate the surface tension of the adhesive material to flatten the exposed surface of said adhesive material.

4. (Reiterated) The apparatus of claim 1, wherein said at least one mechanism is configured to manipulate the difference in pressure within said adhesive material and ambient air to be equal to twice the surface tension of said adhesive material divided by a radius of curvature of the adhesive material.

5. (Amended) The apparatus of claim 1, wherein said at least one mechanism is configured to use the surface tension of the adhesive material to control surface area and thickness of the adhesive material available for application to said at least one semiconductor component.

6. (Reiterated) The apparatus of claim 1, wherein said at least one mechanism comprises at least one of a coating stencil, a pump and control system, a wiper, a vacuum, and a height detection mechanism.

7. (Twice Amended) The apparatus of claim 1, wherein said at least one mechanism comprises a coating stencil including:

a generally flat and generally horizontal top surface; and

a plurality of apertures aligned to wet said defined portion of said at least one semiconductor component with said adhesive material, said plurality of apertures sized and configured to control extrusion of said adhesive material through said coating stencil to define an area of the exposed surface of said adhesive material.

8. (Reiterated) The apparatus of claim 7, wherein said coating stencil is disposed over said at least one upward facing opening of said at least one pool chamber, such that the only access from within said at least one pool chamber through said at least one upward facing opening to above the adhesive reservoir is through said plurality of apertures of said coating stencil.

9. (Previously Amended) The apparatus of claim 7, wherein the plurality of apertures of said coating stencil is substantially rectangular in shape.

10. (Previously Amended) The apparatus of claim 7, wherein the plurality of apertures of said coating stencil is substantially square in shape.

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11. (Previously Amended) The apparatus of claim 7, wherein the plurality of apertures of said coating stencil is positioned substantially parallel to each other and is spaced so as to have a centerline pitch between each aperture of said plurality of apertures of .020 inches (.051 cm).

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12. (Previously Amended) The apparatus of claim 11, wherein the plurality of apertures of said coating stencil numbers 23 in quantity.

13. (Previously Amended) The apparatus of claim 7, wherein the plurality of apertures of said coating stencil is .260 inches (.660 cm) in length and is .010 inches (.025 cm) in width.

14. (Previously Amended) The apparatus of claim 7, wherein the plurality of apertures of said coating stencil is sized and configured as a result of considering adhesive material viscosity.

15. (Previously Amended) The apparatus of claim 14, wherein the plurality of apertures of said coating stencil is sized and configured to suit an adhesive material viscosity ranging from approximately 1000 to 500,000 centipoise.

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16. (Previously Amended) The apparatus of claim 14, wherein the plurality of apertures of said coating stencil is sized and configured to optimally accommodate an adhesive material viscosity of approximately 62,000 centipoise.

17. (Previously Amended) The apparatus of claim 14, wherein the plurality of apertures of said coating stencil is sized and configured to optimally accommodate an adhesive material viscosity of approximately 62,000 centipoise at a temperature of approximately 77° F (25 °C).

18. (Previously Amended) The apparatus of claim 7, wherein the plurality of apertures of said coating stencil is arranged generally parallel to each other and is spaced so as to have a centerline pitch between each aperture of said plurality of apertures of .020 inches (.051 cm).

19. (Previously Amended) The apparatus of claim 18, wherein the plurality of apertures of said coating stencil numbers 23 in quantity.

20. (Previously Amended) The apparatus of claim 18, wherein the plurality of apertures of said coating stencil is .260 inches (.660 cm) in length and is .010 inches (.025 cm) in width.

21. (Reiterated) The apparatus of claim 7, further comprising a vacuum on a bottom side of said coating stencil.

22. (Previously Amended) The apparatus of claim 1, further comprising at least one second mechanism configured to bring said defined portion of at least one semiconductor component in contact with said exposed surface of adhesive material.

23. (Reiterated) The apparatus of claim 1, wherein said adhesive reservoir further comprises an adhesive circulation mechanism configured to circulate said adhesive material and maintain uniformity of said adhesive material.

24. (Previously Amended) The apparatus of claim 1, wherein said at least one mechanism includes a pump configured to supply said adhesive material to said adhesive reservoir and a control system to control said supply of said adhesive material to said adhesive reservoir to control extrusion of said adhesive material to a selectable height.

25. (Reiterated) The apparatus of claim 1, wherein said at least one mechanism is attached to said adhesive reservoir.

26. (Reiterated) The apparatus of claim 1, wherein said at least one semiconductor component comprises at least one lead finger on a lead frame.

27. (Amended twice) An apparatus for applying viscous material to one or more underside surfaces of at least one semiconductor component, comprising:

a reservoir for providing an exposed surface of viscous material to only one or more underside surfaces of at least a portion of at least one semiconductor component positioned thereover, said reservoir comprising at least one pool chamber in fluid communication with a viscous inflow chamber, said at least one pool chamber defined by at least one upward facing opening, said reservoir shaped such that the exposed surface of viscous material is supplied to a precise location above said at least one upward facing opening, said viscous material having a surface tension;

at least one first mechanism configured to provide said viscous material to a desired selectable height above said at least one upward facing opening; and

at least one second mechanism associated with said reservoir, said at least one second mechanism configured to level said exposed surface of viscous material above said at

least one upward facing opening, to maintain said exposed surface of viscous material at a substantially constant height and to increase the effective exposed surface of viscous material.

28. (Previously Amended) The apparatus of claim 27, wherein said at least one first mechanism comprises:

a pump for supplying said viscous material to said reservoir; and

a control system for controlling said supply of the viscous material to said reservoir.

29. (Reiterated) The apparatus of claim 27, wherein said exposed surface comprises a meniscus.

30. (Previously Amended) The apparatus of claim 27, wherein said at least one second mechanism is configured to manipulate said surface tension of the viscous material to flatten out the exposed surface of said viscous material.

31. (Reiterated) The apparatus of claim 27, wherein said at least one second mechanism is configured to manipulate the difference in pressure within said viscous material and ambient air to be equal to twice the surface tension of said viscous material divided by a radius of curvature of the viscous material.

32. (Amended) The apparatus of claim 27, wherein said at least one second mechanism is configured to use the surface tension of the viscous material to control surface area and thickness of the viscous material available for application to said at least one semiconductor component.

33. (Reiterated) The apparatus of claim 27, wherein said at least one second mechanism comprises at least one of a coating stencil, a wiper, a vacuum, and a height detection mechanism.

34. (Previously Amended) The apparatus of claim 27, wherein said at least one second mechanism comprises at least one coating stencil including:

a generally planar horizontal top surface; and

a plurality of openings positioned to wet said at least a portion of said at least one semiconductor component with said viscous material, said plurality of openings sized and configured to control extrusion of said viscous material through said at least one coating stencil to further increase the exposed surface of said viscous material.

35. (Reiterated) The apparatus of claim 34, wherein said at least one coating stencil is disposed over said at least one upward facing opening of said at least one pool chamber, such that the only access from within said at least one pool chamber through said at least one upward facing opening to above the reservoir is through said plurality of openings of said at least one coating stencil.

36. (Previously Amended) The apparatus of claim 34, wherein said plurality of openings of said at least one coating stencil is configured to apply said viscous material to only a selected portion of said at least one semiconductor component.

37. (Previously Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil is generally rectangular in shape.

38. (Previously Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil is generally square in shape.

39. (Previously Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil is positioned generally parallel to each other and is spaced so as to have a centerline pitch between each opening of said plurality of openings of .020 inches (.051 cm).

40. (Previously Amended) The apparatus of claim 39, wherein the plurality of openings of said at least one coating stencil numbers 23 in quantity.

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41. (Previously Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil is .260 inches (.660 cm) in length and is .010 inches (.025 cm) in width.

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42. (Previously Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil is sized and configured as a result of considering viscous material viscosity.

43. (Previously Amended) The apparatus of claim 42, wherein the plurality of openings of said at least one coating stencil is sized and configured to manage a viscous material viscosity ranging from approximately 1000 to 500,000 centipoise.

44. (Previously Amended) The apparatus of claim 42, wherein the plurality of openings of said at least one coating stencil is sized and configured to optimally accommodate a viscous material viscosity of approximately 62,000 centipoise.

45. (Previously Amended) The apparatus of claim 42, wherein the plurality of openings of said at least one coating stencil is sized and configured to optimally accommodate a viscous material viscosity of approximately 62,000 centipoise at a temperature of approximately 77° F (25 °C).

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46. (Previously Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil is arranged generally parallel to each other and is spaced so as to have a centerline pitch between each opening of said plurality of openings of .020 inches (.051 cm).

47. (Previously Amended) The apparatus of claim 46, wherein the plurality of openings of said at least one coating stencil numbers 23 in quantity.

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48. (Previously Amended) The apparatus of claim 34, wherein the plurality of openings of said at least one coating stencil is .260 inches (.660 cm) in length and is .010 inches (.025 cm) in width.

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49. (Previously Amended) The apparatus of claim 34, wherein said at least one first mechanism comprises a vacuum on a bottom side of said at least one coating stencil.

50. The apparatus of claim 27, further comprising at least one third mechanism configured to bring said at least one semiconductor component in contact with said exposed surface of viscous material.

51. The apparatus of claim 27, wherein said reservoir further comprises a circulation mechanism configured to circulate said viscous material and maintain uniformity of said viscous material.

52. The apparatus of claim 27, wherein said at least one second mechanism is attached to said reservoir.

53. The apparatus of claim 27, wherein said at least one semiconductor component comprises at least one lead finger of a lead frame.

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